

Appl. No.: 09/626,191
Amdt. dated September 17, 2003
Reply to Office action of June 17, 2003

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A product demand forecasting system, comprising
a profile extractor that generates a demand profile of a new product yet to be introduced based on demand profiles of similar products already introduced, wherein the profile extractor normalizes and averages the demand profiles of the similar products to obtain the demand profile of the new product;

a life-cycle demand predictor that generates a total life-cycle demand of the new product based on historical demand data of the similar products;

a forecast creator coupled to the profile extractor and the demand predictor to generate a life-cycle demand forecast for the new product based on the demand profile and total life-cycle demand of the new product; and

a future demand extrapolation module coupled to the forecast creator to extrapolate the total life-cycle demand of the new product by calculating an average demand per time period of each of the similar products, associating each average demand per time period with a date that represents a midpoint of the life-cycle of each similar product, and calculating an estimate of the average demand per time period at the date of the midpoint of the life-cycle of the new product.

2. (Currently amended) The product demand forecasting system of claim 1, wherein the profile extractor further comprises

a relevant product selection module that selects the similar products and extracts the historical demand data of the similar products from an external historical demand database; and

a demand normalization and average profile determination module that calculates and normalizes the demand profile of each of the similar product, and averages all the normalized demand profiles to obtain the demand profile of the new product.

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3. (Currently amended) The product demand forecasting system of claim 2, wherein the demand normalization and average profile determination module normalizes the demand profiles of the similar products for their-lengths of life and total life-cycle demands.

4. (Currently amended) The product demand forecasting system of claim 2, wherein the demand normalization and average profile determination module averages all the normalized demand profiles by

discretizing each profile at a pre-specified number of equidistant points between the beginning and end of the life-cycle of each demand profile; and

calculating ~~the-an~~ empirical mean and ~~the-an~~ empirical standard deviation of all the demand profiles of the similar products at these equidistant points to yield an averaged demand profile as the demand profile of the new product.

5. (Original) The product demand forecasting system of claim 4, wherein the demand normalization and average profile determination module also estimates variance information of the normalized and averaged demand profiles.

6. (Canceled).

7. (Canceled).

8. (Original) The product demand forecasting system of claim 1, further comprising an updating module that provides a revised new total life-cycle demand estimate using (1) the total life-cycle demand of the similar product, (2) the demand profile of the new product, and (3) past demand information, when available, of the new product.

9. (Original) The product demand forecasting system of claim 8, wherein the forecast creator is also coupled to the updating module such that if the forecast

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creator receives the revised new total life-cycle demand estimate, the forecast creator uses the revised new total life-cycle demand estimate instead of the total life-cycle demand from the life-cycle demand predictor to calculate the life-cycle demand forecast.

10. (Currently amended) A method of providing a life-cycle product demand forecast for a new product yet to be introduced, comprising

collecting historical demand data of similar products of the new product, wherein the similar products have already been introduced;

generating demand profiles of the similar products based on the historical data of the similar products;

normalizing and averaging the demand profiles of the similar products to obtain a demand profile of the new product;

generating a total life-cycle demand of the new product based on the historical demand data of the similar products; and

generating the life-cycle product demand forecast for the new product based on the demand profile and total life-cycle demand of the new product;

wherein generating the total life-cycle demand of the new product comprises calculating an average demand per time period of each of the similar products, associating each average demand per time period with a date that represents the midpoint of the life-cycle of each product, and using the average demand profile per time period at the midpoint of the life-cycle of each similar product to calculate an estimate of the average demand per time period at a midpoint of the life-cycle of the new product.

11. (Canceled).

12. (Currently amended) The method of claim 10, wherein ~~the step of~~ normalizing and averaging the demand profiles averages all the normalized demand profiles by

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discretizing each profile at a pre-specified number of equidistant points between the beginning and end of the life-cycle;

calculating ~~the~~ an empirical mean and ~~the~~ an empirical standard deviation of all the profiles at ~~these~~ the equidistant points to yield an averaged demand profile as the demand profile of the new product.

13. (Currently amended) The method of claim 10, wherein ~~the step of~~ normalizing and averaging the demand profiles further comprises ~~the step of~~ estimating variance information of the normalized and averaged demand profiles.

14. (Canceled).

15. (Original) The method of claim 10, further comprising determining if past demand information of the new product is available; if the past demand information of the new product is available, then providing a revised new total life-cycle demand estimate using (1) the total life-cycle demand of the similar product, (2) the demand profile of the new product, and (3) the past demand information of the new product.